Claim Amendments

1. (currently amended) . A system for smoothing jitter experienced by data packets in transmission from a transmitter to a receiver, comprising: a delay estimator adapted to estimate an adaptive packet delay histogram, having a mean, wherein said packet delay histogram is a function ~~representative~~ of the delays experienced by said data packets in transmission from a transmitter to a receiver and the number of data packets received at the receiver; a playout delay evaluator in communication with the delay estimator and adapted to calculate a playout time, wherein the calculation of said playout time utilizes said mean and a first variance derived from a portion of said packet delay histogram; and a playout buffer monitor adapted to buffer the data packets for the delay amount determined by the playout delay evaluator and then output the delayed data packets.

2. (original) The system of claim 1, wherein the delay is calculated by subtracting the first variance from a mean delay experienced by data packets in transmission from a transmitter to a receiver.

3. (original) The system of claim 2, wherein the variance is

calculated based upon a portion of the histogram that is less than the mean delay.

4. (original) The system of claim 1, wherein the first variance is calculated using a second variance calculated from a portion of the histogram that differs from the portion used to derive the first variance.

5. (original) The system of claim 1, further comprising a delay smoother to control changes in playout time.

6. (original) The system of claim 1, wherein the playout time is further controlled by expanding increases in playout time and limiting decreases in playout time.

7. (currently amended) A method for substantially reducing jitter experienced by data packets in transmission from a transmitter to a receiver, comprising: estimating a mean delay using a packet delay histogram, wherein said packet delay histogram is a function ~~representative~~ of the delays experienced by said data packets in transmission from a transmitter to a receiver and the number of data packets received at the receiver; deriving a first variance from a first portion of said histogram; deriving a second variance

from a second portion of said histogram, wherein said first portion and second portion are not identical; setting a delay equal to a function of the mean delay and the first variance; setting a buffer size equal to a function of the first and second variance; and buffering data packets in accordance with said buffer size and delay.

8. (original) The method of claim 7, wherein the delay is equal to the mean delay minus the first variance.

9. (currently amended) The method of claim 7~~m~~ wherein the buffer size is equal to the sum of the first and second variances.

10. (currently amended) A method for substantially reducing jitter experienced by data packets in transmission from a transmitter to a receiver, comprising: estimating a mean delay using a packet delay histogram, wherein said packet delay histogram is a function ~~representative~~ of the delays experienced by said data packets in transmission from a transmitter to a receiver and the number of data packets received at the receiver; deriving a first variance from a first portion of said histogram; deriving a second variance as a function of the first variance; setting a delay equal

to a function of the mean delay and the first variance; setting a buffer size equal to a function of the first and second variance; and buffering data packets in accordance with said buffer size and minimum delay.

11. (original) The method of claim 10, wherein the second variance is equal to the first variance multiplied by a constant.

12. (original) The method of claim 10, wherein the second variance is equal to a constant minus the first variance.

13. (currently amended) A system for smoothing jitter experienced by data packets in transmission from a transmitter to a receiver, comprising: a delay estimator for estimating a packet delay histogram, wherein said packet delay histogram is a function ~~representative~~ of the delays experienced by said data packets in transmission from a transmitter to a receiver and the number of data packets received at the receiver; and a playout buffer monitor having a buffer size equal to the sum of a first variance and a second variance, wherein the first variance is calculated from a first portion of said packet delay histogram and the second variance is calculated from a

second portion of said packet delay histogram, and wherein said playout buffer monitor buffers the data packets for a minimum delay amount determined by the first variance.

14. (currently amended) A system for managing jitter experienced by data packets in transmission from a transmitter to a receiver, comprising: a delay estimator for estimating a packet delay histogram and a mean delay, wherein said packet delay histogram is a function of the delays experienced by said data packets in transmission from a transmitter to a receiver and the number of data packets received at the receiver; and a playout delay evaluator in communication with the delay estimator and adapted to determine a plurality of variances based upon a plurality of portions of the packet delay histogram, wherein the calculation of a first variance is used to determine a delay and the calculation of a second variance is used to determine a buffer size; and a playout buffer monitor having the calculated buffer size wherein the playout buffer monitor buffers the data packets selected by the playout delay evaluator for the delay and then outputs the delayed data packets.

15. (currently amended) A media processing system for

transmitting, receiving, and processing media across networks wherein the media processing system has substantially reduced jitter experienced by data packets in transmission from a transmitter to a receiver, comprising: a plurality of media processors wherein the media processor is capable of processing media; a plurality of packet processors in communication with at least one of said media processors wherein the packet processor is capable of packetizing processed media; a host processor in communication with at least one said packet or media processors; and a playout buffer, implemented in either the media processor or packet processor, having a buffer size equal to a function of a first variance and a second variance and using a delay equal to a function of a mean delay and the first variance wherein said mean delay, first variance and said second variance are determined from a packet delay histogram, wherein said packet delay histogram is a function ~~representative~~ of the delays experienced by said data packets in transmission from a transmitter to a receiver and the number of data packets received at the receiver.

16. (original) The system of claim 15, wherein the second variance is equal to a function of the first variance and a

constant.

17. (original) The system of claim 15, wherein the delay is calculated by subtracting the first variance from the mean delay.

18. (original) The system of claim 15, wherein the first variance is derived from a portion of the histogram that is less than the mean delay.

19. (original) The system of claim 15, wherein the second variance is derived from a portion of the histogram that differs from the portion used to derive the first variance.

20. (currently amended) A media processing system for transmitting, receiving, and processing media across networks, comprising: a plurality of media processors, each of said media processors having at least two ~~a plurality of~~ processing layers operating in parallel wherein each processing layer has at least one processing unit, at least one program memory, and at least one data memory, each of said processing unit, program memory, and data memory being in communication with one another; a plurality of packet processors in communication with at least one of said media

processors wherein each of said packet processors is capable of packetizing processed media; a host processor in communication with at least one of said plurality of packet processors or at least one of said plurality of media processors; and a playout buffer, implemented in either the at least one of said plurality of packet processors or at least one of said plurality of media processors, having a buffer size equal to a function of a first variance and a second variance wherein said first variance and said second variance are determined from a packet delay histogram, wherein said packet delay histogram is a function ~~representative~~ of the delays experienced by said data packets in transmission from a transmitter to a receiver and the number of data packets received at the receiver.

21. (original) The media processing system of claim 20, wherein at least one processing unit in at least one of said processing layers performs echo cancellation functions on received data, wherein at least one processing unit in at least one of said processing layers performs encoding or decoding functions on received data, and wherein a task scheduler is adapted to receive a plurality of tasks from a source and distribute said tasks to the processing layers.